Asian Journal of Accounting and Governance **8**: 25–35 (2017) Special Issue ISSN 2180-3838
(https://doi.org/10.17576/AJAG-2017-08SI-03)

Intellectual Capital Management Practices in Malaysian Private Hospitals

NORADIVA HAMZAH, HAZLINA HASSAN, NORMAN MOHD SALEH & AMRIZAH KAMALUDDIN

ABSTRACT

Intellectual capital has emerged as an indispensable element for enhancing productivity and sustaining performance of organizations in this knowledge-based economy. In the healthcare industry, intellectual capital forms the basis for continuing innovation and subsequent performance. Hence, the management of hospitals needs sound intellectual capital management in order to ensure sustainability. Moreover, the activities of hospitals generally depend more on intangible resources such as clinical skills, knowledge, expertise, experiences, competencies, doctor-patient relation, doctors' and hospital's reputation rather than physical resources like physical assets. For this study, Malaysian private hospitals were selected as sample to investigate how hospitals extract the value of their intangible capital. This study aims at providing empirical evidence on the intellectual capital management practices in Malaysian private hospitals. Data was collected from a series of interviews with representatives from five private hospitals in Malaysia. Cross-case study analysis was carried out in analysing the data collected to develop patterns found in the evidence. The study reveals that the intellectual capital management in hospital industry is quite unique especially in the human capital management and the relational capital management. For human capital management, clinical staffs' competencies are crucial. Interestingly, the study found that physicians are often not the direct employees of the hospitals. This leads to a unique relationship between the hospital and the physicians. Meanwhile for the relational capital management, this study also reveals that the unique relationship that exists between the physicians and patients leads to the structural capital of the hospitals which may influence the hospitals' reputations and good names.

Keywords: Intellectual capital; Intellectual capital management; hospitals; Cross-case study analysis; interviews

INTRODUCTION

The most valuable assets of healthcare organizations are the knowledge, skills and experiences of their doctors and nurses. These valuable assets are intangible and embedded in people. It is termed as Intellectual capital (IC) and it enables hospitals to function. The concept of IC is often discussed, and a multi-facet description of IC has been proposed by IC theorists. The knowledge that is embedded in individuals (employees, suppliers and customers) and organizations has been termed as intellectual capital (Bontis 1998; Demediuk 2002) and contributes to improve business performance (Dumay 2012). The value of IC must be recognized, utilized and maximized. Hence, the ability to manage IC is vital and organizations should manage their IC effectively. In order to optimize IC creation, a suitable intellectual capital management (ICM) is needed. ICM is part of the organization's strategy to reap the benefits from IC. According to Boxall (1996), making the right choice of strategy is vital to extract IC because it plays important role in determining the ultimate success or failure of the business. Variations in the performance might be explained by differing IC and differing approaches and capabilities to leverage it. As a research-intensive and highly innovative industry, hospitals should systematically and strategically manage its' IC to meet strategic goals and be more competitive.

Hospitals need to be enlightened in terms of its ICM. This is due to the fact that hospitals are highly dependent on people's knowledge, skills, procedures, professional experiences, technology innovativeness and services provided to the stakeholders. Hospitals need to employ and coordinate special knowledge, skills and abilities embedded in their employees to deliver quality care to patients (Van Beveren 2003; Wiig 2002; Zigan 2008). For example as highlighted by Peng and Roos (2007) human capital within hospitals is extremely important as it reflects the work of highly knowledgeable and skilled people caring for those in need of specialized healthcare.. Previous studies found that nurses' knowledge or experience have been empirically linked to better quality patient care (Aiken et al. 2011; Duffield et al. 2011). This indirectly reflect the reputation, quality of services and good name of the hospitals.

Hospitals relies more on the capability of the knowledge embedded assets. In order to provide high quality services, hospitals rely on the management of knowledge which will add value to the workers, products and interactions. It focuses more on the value maximization. The management challenges with the dynamic healthcare environment, create a unique setting within which to apply an IC management perspective. However, the explicit application of an IC management lens to the healthcare sector is relatively new (except for Veltri, Bronzetti & Sicoli 2011) and has not been rigorously examined conceptually, especially in the context of private

hospitals in Malaysia. In Malaysia, most of the previous study on intellectual capital focused on the IC reporting and IC disclosure (eg: Foong et al. 2009; Goh & Lim 2004; Huang et al. 2008).

The aim of this paper is to synthesize what is known about the management of IC in private hospitals in Malaysia through a case study approach. IC is becoming a crucial factor for hospital's long-term profit and performance. To date, very few research explore the fundamental knowledge resources that constitute IC in hospital. This gap in research may be due to the fact that what constitutes IC in hospital may not be the same for another organization. Therefore, to unpack and explore IC, an in-depth understanding of the context and organization is necessary. Comparative case study research focused on identifying and unpacking IC across multiple hospitals may provide new insights into the nature of IC. Thus, this study explores the development and management of IC in hospitals.

Literature Review

According to Habersam and Piber (2003), there is awareness of IC in hospitals and the measurement and management of IC is highly relevant. Moreover, as coined by Peng and Roos (2007), intellectual capital elements and performance indicators are important for performance management practices in Taiwanese hospitals.

INTELLECTUAL CAPITAL IN HEALTH CARE INDUSTRY

The most valuable assets of healthcare organizations are the knowledge, skills, and experiences of their staffs. According to Evans, Brown and Baker (2015), these intangible resources, coupled with the value derived from internal capabilities and external relationships, constitute the intellectual capital of healthcare organizations. Healthcare organizations possess vast structured and unstructured stockpiles of formal and informal know-how distributed across the minds of individuals, captured in files, databases, and reports, and embedded in the culture and routines of organizations themselves (Evans, Brown & Baker 2015).

In healthcare industry IC defined as the stock of physicians and nursing knowledge available in an organization (Covell & Sidani 2012). Most of the IC research in healthcare industry emphasize on measuring rather than managing IC (eg: Kim & Chung 2012; Peng, Pike & Roos 2007). There is very little study on how to systematically manage IC such as what strategies can be used to leverage IC within and across healthcare industry (Veltri, Bronzetti & Sicoli 2011). Therefore, more research is required to understand what strategies managers can use to increase, deploy, improve and leverage IC in healthcare organizations.

INTELLECTUAL CAPITAL MANAGEMENT

In order to be accounted and remain competitive in market IC has to give value to products and services. The untapped IC is an enormous loss to an organization. Extracting IC allows the improvement and innovation of products and processes. Hence, managers must determine how IC can be utilized more effectively to produce superior returns. It is claimed that IC must be captured, managed and accounted for in a strategic manner. This will help to formulate the right strategies to achieve effective management of IC and to create higher value of products and services. Thus, an understanding of how knowledge is formed and how people and organizations learn to use knowledge embedded in those assets are essential. Most of the definition and framework of IC include human, relational, and structural elements (Roos et al. 1997).

Human capital (HC) refers to the know-how, skills, capabilities, experiences and expertise of a firm's members and has been recognized as strategic resources in today's fast paced and changing competitive climate (Youndt, Subramaniam & Snell 2005). HC within hospitals is extremely important as it reflects the work of highly knowledgeable and skilled people caring for those in need of specialized healthcare (Mohamedi & Ghorbanhosseini 2015; Peng & Roos 2007). Doctors and nurses are referred as the theoretical and practical knowledge registered expertise obtain from academic education, participation in continuing professional development activities and specialty training and work experience (Duffield et al., 2011; Mohamedi & Ghorbanhosseini 2015).

Structural capital (SC) is referring to the processes and procedures that are created by and stored in a firm's technology system that speeds the flow of knowledge through the organisation (Youndt, Subramaniam & Snell 2004). It includes the firms' systems, structure, corporate culture, organizational process efficiency, databases, information and production technology (Cohen & Kaimenakis 2007). This component of IC also defines as embodiment, empowerment and supportive infrastructure of HC (Bontis 1998). It provides the environment that encourages individuals to invest their HC to create and leverage knowledge. A good SC will provide a good environment for rapid knowledge sharing, collective knowledge growth, shortened lead times and more productive people (Stewart 2000). For hospitals, SC is the structural resources that contain doctor and nursing knowledge, practice guidelines and protocols that are used to support in the application of their knowledge and skills in the delivery of patient care.

Relational capital (RC) is the knowledge embedded within the relationships that a company provides with network of shareholders, suppliers, strategic partners and any enterprise beyond the boundaries of the company (Allee 2000). RC embraces all the relations the firm has established stakeholder groups (Bontis 1998). The value of RC is determined by the reputation of the company. It comprises part of SC and HC involved with relations of the firm with shareholders. and the perceptions that they hold about the firm (Riahi-Belkaoui, 2003). For hospitals, relational capital contains the relationship within the relationships with internal and external stakeholders.

For example doctors and patients relationship, doctors and nurses relationship and doctors and management relationship. As coined by Bontis (2002), RC is influenced by the organization's HC and SC (Bontis 2002).

ICM focuses on building and governing intellectual assets from strategic and enterprise governance perspectives with some focus on tactics. Its function is to take overall care of the enterprise's IC (Wiig 1997). ICM involves the establishment of monitoring, measurement and management practices that secure intellectual assets for use by the organizations. In hospitals, humans such as physicians, nurses and others are expensive to hire, train and sustain. Leaders should encourage and motivate their team members including the organization personnel to embrace and believe that managing important elements of intellectual capital can give a positive impact towards hospital performances and success. The performances of an organization often has a direct relationship with the ability and competency of its leader. It is believed that if the leaders are able to manage IC properly, hospital performance should be at the top or amongst the first tier organization. Thus, according to Bhatti and Zaheer (2014), ICM should be highlighted in the organizations' knowledge strategy.

Past studies have shown that investment in IC and effective management of IC lead to increase in firm's performance, profitability and market value (Maditinos et al. 2011). In order to avoid the waste of costs and efforts, it is necessary to identify the priority and importance of each dimension of IC in hospitals, and then to develop and manage them. Thus, management of IC is very crucial.

RESEARCH FRAMEWORK AND METHODOLOGY

The conceptual model is developed based on the Resource Based View as an attempt to bring together an approach for effective management of IC. The Resource Based View recognises the relationship between resources and competitiveness. The resource-based view (RBV) sees resources as key to superior firm performance. The RBV is an economic tool used to determine the strategic resources available to a firm. These resources can be exploited by the firm in order to achieve sustainable competitive advantage. However RBV does not explain how to manage the resources in order to create value (Ambrosini & Bowman 2001). Thus, this study argues that intellectual capital management is needed to harness the IC. Effective ICM will enhance and add value to organizational performance. To survive organizations need to clearly identify their IC and the right strategy to manage it. Figure 1 depicts the proposed research framework. The IC is the strategic resources of firms and intellectual capital management is the best way to leverage knowledge that embedded in human, structural and relational capital.

The conceptual model highlights the IC components and ICM association. The identification of types and characteristics of IC developed will help managers to devise better management tools and techniques to exploit their IC which will lead to superior returns.

METHODOLOGY

This study employs multiple case study method on a total of five hospitals (Hospital A, B, C, D and E). Data was collected through in-depth semi-structured interviews with the key personnel responsible for management resources practices, and have knowledge about the hospitals' operations. Observations, 'hospital tours' and documents were utilised to collaborate evidence information provided. Once access to the hospitals was obtained from their respective top management team, exploratory interview with CEOs were arranged and the hospitals were visited. Each of the interviews lasted between 60 minutes to two hours. All interview sessions were recorded. The documents given were analysed and some of them are classified as private and confidential data shared for the

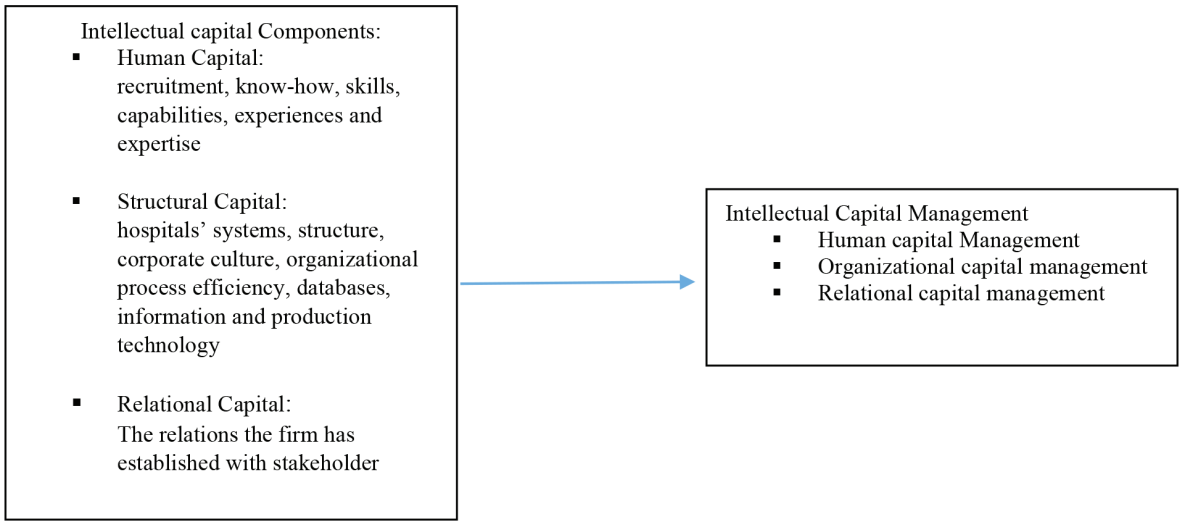

FIGURE 1. The association between IC components and ICM practices

purpose of knowledge and not allowed to be reported. Interview data was then transcribed. The analysis was carried out by using content analysis techniques in order to developed patterns of themes. The patterns were developed using codes to standardise the themes. The patterns were also investigated against the documents obtained from participating hospitals website.

The protocol is important in highlighting the procedures taken from the beginning to the final stage of data analysis. According to Yin (2003), a case study protocol contains the instrument as well the procedures and general rules to be followed. The use of case study protocol is a major way of increasing the reliability of case study research and is intended to guide the researcher in carrying out the data collection (Yin, 2003). Table 1 shows the sequence of activities involved in structuring case study protocol for this study.

The Table 2 shows the comparative background of the participating hospitals.

The interviewees are among the top management team of hospitals consists of Human Capital Manager (HCM), Marketing Manager (MM), Finance Manager (FM), Chief Executive Officer (CEO) and Chief Operating Officer (COO). The interviews were recorded with the permission of the interviewees and the interviews were transcribed for analysis. A semi-structured theme interview was used covering issues related to the ICM in hospital. The nature of these interviews were very informal. Since the aim was to obtain as much input as possible, the interviewees were encouraged to give their views, ideas and suggestions to the current study.

There were seven respondents selected conveniently as the sample size for this study. For this small scale study, the sample size of seven is considered sufficient (Kiran 2010; Taylor 1994). There is no precise guide on the number of cases to be included in any research using case study. Patton (1990) states that there is no exact number or range of cases that could serve as guidelines for researchers, "clamming there are no rules" for sample size in qualitative research. Eisenhardt (1989) recommends that cases should be added until "theoretical saturation" is reached. While there is no ideal number of cases, she suggested that a number of four to ten cases often works well. With fewer than four cases, it is often difficult to generate theory with much complexity and its empirical grounding is likely to be unconvincing.

Based on Table 3, all the interviewees for Hospital B,C and D are the CEOs of the hospital. A CEO is the highest-ranking executive in a company, and their primary responsibilities include making major corporate decisions, managing the overall operations and resources of a company, and acting as the main point of communication

TABLE 1. Case Study Protocol (Design and Content)

Part	Structure of Case Study Protocol	Activities
1	Introduction to case study: i. Case Study Design ii. Case study questions iii. Conceptual framework iv. Case study protocol establishment	The case study questions are formulated based on the following issues: <u>Background</u> Hospitals need to be enlightened in terms of its ICM. Hospitals are highly dependent on people's knowledge, skills, procedures, professional experiences, technology innovativeness and services provided to the stakeholders To date, very few research explore the fundamental knowledge resources that constitute IC in a particular industry. This gap in research may be due to the fact that what constitutes IC in one industry or organization may not be the same for another. Therefore, to unpack and explore IC, an in-depth understanding of the context and organization is necessary.
2	Data collection procedures: i. Identification and case study selection ii. Data collection plan	Selection of case study: i. Selection of sample based on years of establishment from year 1930 to recent one year 2004; location and availability of the hospital's top management team ii. Data collection plan: ➢ Initial contact with the hospitals ➢ Draft and submit the official letter ➢ Arrange the field visit and interview ➢ Data collection – semi structured open ended interview ➢ Data collection – documents review ➢ Voice recorder
3	Case study interview question	Developed from Literature Rereview Bontis (1998) Peng et al. (2007)
4	Case study analysis – using Content Analysis	i. Within case and cross-case analysis using themes and pattern matching ii. Content analysis with word-based approach iii. Explanation building

TABLE 2. Background of Participating Hospitals

	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E
Location	Shah Alam Selangor, Malaysia	Seremban Negeri Sembilan, Malaysia	Kuala Lumpur, Malaysia	Seremban, Negeri Sembilan, Malaysia	Shah Alam, Selangor, Malaysia
Establishment Year	1996	2004	1984	1930	2003
Number of Beds	130	151	189	120	80
Mission/Focus	Believe that customers are unique thus focus on Customer Centricity, people engagement and kaizen or continuous improvement.	Corporate dynamic and shared commitment to the loyalty and four core values in their management; safety, courtesy, integrity and professionalism and continuous improvement.	Be the best healthcare provider to the customer by fulfil the 'fardu kifayah' through its excellent professional, latest technology and dedicated employees.	To give commitment to assist patients improve their health quality of life through a committed professional team.	To give the best provision of accessible, affordable and acceptable tertiary healthcare for all.

TABLE 3. List of Hospitals and interviewees involved

Hospital/Number of employees interviewed	Chief Executive Officer (CEO)	Chief Operating Officer (COO)	Human Resource / Human Capital Manager	Total
Hospital A		1	1	2
Hospital B	1			1
Hospital C	1			1
Hospital D	1			1
Hospital E			2	2

Source: interview

between the board of directors and corporate operations. Therefore, one representative of CEO is adequate to provide the information needed. Hospital A and E are represented by COO and Human Capital Manager (HCM) and Marketing Manager. We interviewed more than one representative for this interview session because the CEO was unable to join due to busy schedule. Interviews were conducted in person. The participants were further assured that the data would not be used for any other purposes other than the research and their particular would be private and confidential.

The data was transcribed into text verbatim and coded for further analysis. The data was coded/generalised into themes referring IC previous literatures. The recorded interviews were played several times as not to miss any information recorded from the interviews. The process continued until the researcher is satisfied that all information has been properly transcribed for further analysis.

In order to meet the construct validity test, this study uses multiple sources of evidence (semi-structured interview, documentation and direct observations), and also establishes a chain of evidence. The semi-structured questions were developed based on previous literature conceptualization and discussions on IC and knowledge management (Dumay 2012; Peng & Roos 2007).

RESEARCH FINDINGS

HUMAN CAPITAL MANAGEMENT

From the evidence obtained, all interviewees highlighted that the important criterion for recruitment is formal qualifications that the employees have. Interestingly employees in hospitals can be classified as clinical staffs and non-clinical staffs. They emphasized the importance to have skills, creative and experience staffs especially for clinical staffs. For non-clinical staffs, they are responsible with the administrative works and are also encouraged to be creative. For example as highlighted by the interviewees:

"*the staff should be more creative, they should settle those problem at their level first, and will only bring it up if they cannot handle it. However as for doctors, they must have at least 5 years' experiences. We really seek for the experienced candidates.*"

..... *COO of Hospital B*

"We want our staff to have skills that beyond their job scope".

..... *COO of Hospital A*

"First priority is qualification".

..... *COO of Hospital C*

For the clinical staffs they involve directly with the hospitals matters. Therefore, post basic skills are very important for nurses. For example as mentioned by COO of Hospital B: "I*n terms of their requirement, we look at certain critical area. For example, intensive care unit, Dialysis, Operation Theatre and* Sterile Processing. *They have to have Post Basic*." This is also supported by the CEO of Hospital C: "s*uch as Critical Unit like Intensive care unit need staff that have more skills and experiences such as post basic skills."* Post Basic skills can only be obtained from public hospital. Furthermore, she also emphasized that it is the requirement under the Private Hospital Act for private hospital to ensure that 50% of their staffs have Post Basic qualification.

For the physicians, generally the medical officers are the hospitals staffs but not for the specialists. They are self-employed. The specialists pay for rental and management fees to the hospitals. As said by CEO of Hospital C: *"doctors serve as independent party"*.

For training and development, all five hospitals conduct continuous training programs and they are very committed to their employees' long-term career development. For example as highlighted by COO of Hospital A: "*if staff need more or new skills, we call trainer to train our staffs*." *"If the staff do not have post basic skills, we send them…."*. However, the training and development program conducted in hospitals focuses more towards enhancing the clinical skills and knowledges. The example has been highlighted during the interviews: *"it is compulsory for each staff to complete 30 hours training allocation organized by us."*

COO of Hospital C

"*Staff nurse need to renew application once a year need to submit continuing development professional point. Need to attend in house training. To get point, staff nurse need to complete 35 points. Especially mid wife. Also need post basic skills from MOH."*

HRM of Hospital E

Working hours for hospital's staff are separated into two different categories; clinical and non-clinical staffs. Non-clinical staffs working hours is within normal office hours (8.00 am to 5.00 pm). Meanwhile, there are three shifts working hours for clinical staffs. This is highlighted by the CEO of Hospital B: "*For all clinical staff, there are 3 shifts."*

The evidence obtained also reveals that ability to work as a team is also one of the human capital criteria developed by the hospitals. All the interviewees agreed that relationship with the doctors is vital. Even though most of the doctors especially the specialists are independent party but they carry the hospitals reputations. This is a very unique relationship. Therefore, they have to work closely with the specialists. As highlighted by CEO of Hospital B: *"doctors are not our employees. They are independent. They provide professional services and the hospital B provides all the facilities"*.

The hospitals provide all the facilities needed and the specialists provide the professional services. According to HRM of Hospital E "*Medical officer is our staff. But Specialist is self-employed and independently provide service to patients. They pay rental fees. We do the management and marketing part. If the problem arise from the clinical part, the medical director responsible for that. If it involves with management, me myself and executives director responsible for that."*

If patient complaints or summon certain doctors, surely this will affect the hospital as a whole entity. Furthermore, it has been highlighted that the collection from each specialist is vital to hospitals. As mentioned by COO of Hospital C: *"Management also look at their collection from each doctor."*

The evidence also reveals that employees are welcome to involve in any discussion and every employee has the right and opportunity to voice out their opinion and idea. They are empowered in making decisions related to their immediate responsibilities or tasks. For example, as highlighted during the interviews:

"In terms of empowerment, we encouraged our people to decide and make decision. In certain cases, if it involves an emergency case, we let the staff to decide which for the best. This element of empowerment needed for certain situation".

"We listen to them. At least we already give them platform. This is how they can sharpen their skills and enhance their talent. We want them to learn, think and give ideas. The openness concept here applied and get a good feedback from staff.

COO of Hospital A

STUCTURAL CAPITAL MANAGEMENT

The evidence gathered show that hospitals emphasize more on real time interactions within the employees' such as intranet, frequent formal and informal discussions, and brainstorming sessions. For example, as expressed by the interviewees:

"I prefer informal meeting as compared to formal meeting. In case maintenance problem, we have to fix it immediately for patients' safety. We have regular and in prompt to meeting"

HRM of Hospital E

"We have intranet here name Hospital Forum. It open for the staff to give all the ideas and suggestion. We listen to them. At least we already give them platform. This is how they can sharpen their skills and enhance their talent. We want them to learn, think and give ideas."

COO of Hospital A

All standards and procedures are documented in hospitals. This study also found that hospitals have to

comply with the Act and Regulations by the Ministry of Health, Private Hospital Act, Malaysia Society Quality in Health (MSQH), Environmental and Safety. These have been highlighted during the interviewees:

"MSQH is the specific one for hospital… it is more on marketing of our services and act as competitive advantage and the most important thing is our hospital must comply with the Private Hospital Act."

COO of Hospital C

In addition, there is a systematic and integrated system used to record, store and update patients, suppliers and other detail information. As expressed by the COO of Hospital D: "*We also measure everything using Health Information System. This will give me all the data statistically and I can update it every day."*

Finally, private hospital reputations and good name are very crucial in healthcare industry. All the interviewees agreed that they are very concern on the quality of services provided to the stakeholders in order to sustain a good relationship with them. For example, these have been highlighted by the COO of Hospital A:

"For insurance, basically we are actually being selected as a preferable hospital by insurance companies… they are looking at our quality whether we are MSQH, licence, because for us to become their panel hospitals, we have to comply with all these. It is not easy to be listed. Some insurance company limit us up to 50 panels only. Insurance company have all the information and they are the one who choose the hospital panel. Still we have to build trust with them. "

RELATIONAL CAPITAL MANAGEMENT

The evidence gathered emphasized that the focus of RC developed by hospital is on developing good relationship with the stakeholders such as specialists, insurance companies, patients and industry players such as the other private hospitals. For example as highlighted during the interviewees:

"*Services offer to all healthcare is the same. So what make us different with other hospital is to give the best service to the customers. We have Guest Relation Department for those who walk in and give complaint we provide them a special form. Send to Head of Department. Within 7 days need to respond to patient. All those communication send a copy to me in order to know what is happening currently. Immediate action and send email to customer."*

COO of Hospital A

Hospital also develops good relationship with several other private hospitals in order to have a mutual agreement on certain matter and to collaborate in terms of nursing education, sharing equipment and knowledge in certain technology. For example as expressed by COO of Hospital A: *"We had certain procedure for that. Currently joint venture and MOU with Hospital Ara Damansara, Sime Darby Medical Centre and Sunway College. Other than that we also join the private hospital Lembah Klang association committee. Our discussion normally once a month. This is our platform when we share our problem in this industry. Sometimes we do tournament to retain and broaden our relationship and network*."

According to the CEO of Hospital B, relationship between doctor and patient is very special because if it remains, it will inherit it to the rest of family members. According to the CEO, "*Relationship between doctor and patient is special and unique. In fact, doctor is the one who control the relationship. Because we have mutual agreement with doctors. But when the patient summons certain doctor then this hospital reputation will be affected indirectly. Based on feedback form by customer. We also monitor based on the number of patient whether increase or not. If the doctors build a good relationship with patients then we predict it will inherit the relationship with children and the rest of the family members. Perhaps this kind of relationship will last forever."*

As expressed by COO of Hospital C: "*We also aware of having a good relationship with patients. That is why we are more concern about doctors' service because we believe a good demand from patient can be increase if the doctors perform well in their services as well as the nurses and supporting staff."*

Furthermore, the CEO of Hospital A also expressed that the relationship between doctors and patients is very important because this will indirectly determine the collection of the hospital. She explained that, "*We will get more collection when the doctors provide more services. When there is more service provided to the increase number of patients, the more collection that doctor had, and the more the hospital will get."* The COO of Hospital C noted that, "*And sometimes we are not based on the doctor's reputation as well. Management also look at their collection from each doctor. Which doctors are most favoured by patients?"*

DISCUSSION

The cross-case analysis of the ICM is summarised in Table 4.

From Table 4, there is no difference in ICM among all hospitals. The finding shows that the human capital management practiced by the hospitals emphasize more on formal qualifications, skills and years of experiences in clinical speciality are important. Hospitals also provide training for their clinical staffs. For nurses all the hospitals highlighted that post basic skills are very important. This study found that developing individual knowledge is important and socializations and internalization of tacit knowledge is practiced. Hospital is a knowledge intensive industry, all five hospitals have systematically and strategically manage their human capital to meet strategic goals. As IC cannot be observed and understood in the same way as financial, the management has to

TABLE 4. Summary of ICM by each hospital according to theme

	Hospital A	Hospital B	Hospital C	Hospital D	Hospital E
Human Capital Management:					
Recruitment: Formal qualification, experiences, Post basic skills for nurses	√	√	√	√	√
Employees' Capabilities: ability to cope with decision making for clinical emergency cases, encourage creativity and more innovative ideas.	√	√	√	√	√
Training and development: encourage staff to acquire new knowledge and skill, provide in-house training	√	√	√	√	√
Structural Capital Management:					
Formalization Service and Quality					
Marketing Strategies	√	√	√	√	√
Reputation	√	√	√	√	√
Practice guidelines, care maps, protocols, database, information technology	√	√	√	√	√
Relational Capital Management:					
Patients' satisfaction and commitment	√	√	√	√	√
Networking	√	√	√	√	√

Source: interviews, documents and observations

assess whether necessary human resources, capabilities and processes are in place for the successful development and implementation of strategy Furthermore, physicians are often not direct employees of hospitals and may have little interest in contributing their time and knowledge to hospitals improvement efforts.

For structural capital hospital structural capital is operationalized as the availability of practice guidelines such as practice guidelines, care maps or protocols are vital. The developing of documenting organizational knowledge is practiced. Hospitals also employ integrative application repository of explicit knowledge and knowledge application is more towards improving services efficiency. According to Duffield et al. (2011) and Evans, Brown and Baker (2015) hospital's structural capital is associated with better quality of patient care and lower adverse events. This also represents the hospitals' reputations and good names. Marketing strategies are also important and documented in hospitals. In hospitals, there is explicit knowledge on healthcare policy, management and delivery. But it is often not put into practice efficiently and effectively by their knowledge management activity.

Meanwhile for relational capital management, patient' satisfaction is very important. Hospitals develop good relationships with internal stakeholders (doctors, specialists, nurses and other staffs) and external stakeholders (patients, potential customers, insurance agencies and other private hospitals). This study revealed that hospitals have high competitive intelligence. Hence, it is important to protect this knowledge to processes that can be rapidly adopted. A good reputation is also important for hospitals.

In short details for the development and management of IC in Malaysian private hospitals is summarised in Table 5.

Table 5 summarizes and synthesizes the content of each IC components of IC and the ICM practices to leverage the IC. Hospital can be categorised as people-centred organizations and process-oriented organizations. Human capital is the most important and reflects the mission of hospital. The physicians are very important but they are not the employees of the hospitals. This is a very unique relationship – between the physicians and hospitals' management. The physicians carry the hospitals' reputation and good name. Relational capital is also important (patients' satisfaction and commitment, good relational capital with other hospitals) and has been critical concerns for intellectual capital management in hospitals. At the same time hospitals have to monitor and manage their

TABLE 5. The development and management of IC in hospital

Intellectual Capital Components :	Intellectual Capital Management
Human Capital:	Human Capital Management:
➢ Recruitment: Clinical and non-clinical staff ➢ Medical doctor ➢ Specialists	Qualification, skills, experiences, personality and attitude
➢ Skills:	Post basic skill for clinical staff
➢ Employees capability:	Encourage creative and have ability to cope with decision making (clinical emergency cases)
➢ Training and development	Training assessment In-house training
Structural Capital:	Structural Capital Management:
➢ Formalization Service and Quality ➢ Practice guidelines ➢ Information technology	Private Hospital Act, Standard and procedures, Health Information System, MSQH, Regular maintenance Patient Safety, Service Quality Index
➢ Marketing Strategies	Baby Friendly Hospital (Hospital B) Rebranding unit 'Sahabat in hospitall D' program Develop good relationship with insurance panel Pricing strategies Discussion with existing and potential customers
➢ Knowledge Generation and Interaction	Frequent formal and informal discussion, intranet, brainstorming session
➢ Reputation	Name is always associated with high quality services
Relational Capital:	Relational capital Management:
➢ Patients' satisfaction and commitment	Develop good relationship with doctors, patients. Patient complaint- deal within 10 days Regular ward visit Communication direct with doctors Feedback from patients
➢ Networking	Developing good relational capital with other hospitals, share information such as technology and expertise. Developing good relational capital with insurance companies Build trust is vital

Source: interviews, documents and observations

internal care quality, service volume and medical service quality. Another unique characteristics of the hospitals, is the work processes and decisions that can mean life or death for patients. Hence, relationships with organizations and indirect payment for services by patients through third parties such as government programs and insurance companies are important.

CONCLUSION

In hospitals, human capital management is reflected in human staffing. From the evidence obtained, all interviewees highlighted that the important criterion for recruitment are formal qualification, post basic skills, experience as well as employees' personality and attitude. Employees' capability in making decision are also important especially matters related to clinical emergency cases. They are also encouraged to be more creative and innovative when dealing with patients. Tacit knowledge embedded in doctors and clinical staffs are vital in hospital. Thus, the management should invest more in the knowledge and skill development of the employees. This study also gives some directions for the hospital management in developing the hospital's relational capital. From the interviews conducted, the evidence gathered reveal that hospitals put more emphasis on the relational capital components. As highlighted by the interviewees, in hospital, physicians are often not direct employees of the hospitals but liable to the patients. They are independent party and pay rentals and management fees. This is a unique relationships. Thus, hospitals need to engage physicians in addressing issues such as care cost, quality and efficiency. This also directly leads to the reputation and good names of the hospitals. A close collaboration between physicians and hospital is vital. Hospitals cannot grow their market shares without physician participation. Good reputation between doctors and patients indirectly will contribute to hospital income generation. Based on the evidence gathered from

the interviews, all the hospitals also focused on developing good relationship with patients, insurance companies and others private hospitals.

This study offers a rich suite of conceptual lenses that can help to better understand and mange intellectual capital in the pursuit of superior performance in the healthcare industry. The primary research method used was semi-structured interviews and cross-sectional case study focused on hospital managers' perceptions of ICM. This study identifies and examines the strategy applies by hospitals in order to leverage their IC. This study applies RBV to explain the association of IC as resources and ICM is a tool to extract the IC value. Although the literature on IC in healthcare is growing, it is not advanced

The findings of this study must be considered in light of lack of generalization. As case study research is based on a small number of cases, it is not qualified for statistical analysis and interpretation. Second, due to the difficulty to access hospitals and limitated involvement approval from the representatives. The interviews were conducted with the people allowed by the hospitals. For future research, since ICM can be considered as a new field, there are many opportunities for conducting research in this field.

ACKNOWLEDGEMENT

We thank Malaysian Palm Oil Board for financial assistance under research code EP-2016-026

REFERENCES

Allee, V. 2000. The value evolution: Addressing larger implications of an intellectual capital and intangible assets perspectives. *Journal of Intellectual Capital* 1(1): 17-32.

Aiken, L.H., Cimiotti, J., Sloane, D.M., Smith, H.L., Flynn, L. & Neff, D. 2011. The effects of nurse staffing and nurse education on patient deaths in hospitals with different nurse work environments. *Med Care* 49: 1047-53.

Ambrosini,V. & Bowman, C. 2001. Tacit knowledge: some suggestions for operationalization. *Journal of Management Studies* 38(6): 811-829.

Bhatti, W.A. & Zaheer, A. 2014. The Role of Intellectual Capital in Creating and Adding Value to Organizational Performance: A Conceptual Analysis. *The Electronic Journal of Knowledge Management* 12(3): 187-194.

Bontis, N. 1998. Intellectual Capital: an exploratory study that develops measures and models. *Management Decision* 36(2): 63-76.

Boxall, P. F. 1996.The Strategic HRM Debate and the Resource-based View of the Firm. *Human Resource Management Journal* 6(3): 59-75.

Cohen, S. & Kaimenakis, N. 2007. Intellectual Capital and corporate performance in knowledge intensive SMEs. *The Learning Organisation* 14: 241-262.

Covell, C. & Sidani, S. 2012. Nursing intellectual capital theory: Operationalization and empirical validation of concepts. *Journal of Advanced Nursing* 69(8): 1785-96.

Demediuk, P. 2002. Intellectual Capital reporting: new accounting for the new economy. *Asian Academy of Management Journal* 7(1): 57-74.

Duffield, C., Diers, D., O'Brien-Pallas, L., Aisbett, C, Roche, M., King, M. & Aisbett, K .2011. Nursing staffing, nursing workload, the work environment and patient outcomes. *Applied Nursing Research* 24: 244-255.

Dumay, J.C. 2012. Grand theories as barriers to using IC concepts. *Journal of Intellectual Capital* 13(1): 4-15.

Eisenhardt, K.M. 1989. Building theories from case study research. *The Academy of Management Review* 14(4): 532-550.

Evans, J.M., Brown, A. & Baker, G.R. 2015. Intellectual capital in the healthcare sector: a systematic review and critique of the literature. *BMC Health Services Research* 15: 1-14.

Foong, S.Y., Loo, S.C. & Balaraman, R. 2009. Intellectual capital reporting and corporate characteristics of public-listed companies in Malaysia. *Journal of Financial Reporting and* Accounting 7(1): 17-35.

Goh, P.C. & Lim, K.P. 2004. Disclosing intellectual capital in company annual reports: evidence from Malaysia". *Journal of Intellectual Capital* 5(3): 500-10

Habersam, M. & Piber, M. 2003. Exploring intellectual capital in hospitals: two qualitative case studies in Italy and Austria", *European Accounting Review* 12(4): 753-779.

Huang, C.C., Zainal Abidin, Z & Jusoff, K. 2008. External Reporting of Human Capital in Malaysia. *Asian Social Science* 4(8): 3-11.

Kim, W-K. & Chung, H-I.C. 2012. Effects of Intellectual Capital on Organizational Performance of Nurses in Medium and Small Hospitals. *Journal of Korean Academy of Nursing Administration* 18(4): 452-459.

Kiran, K. 2010. Service quality and customer satisfaction in acadamic libraries: Perspectives from a Malaysian university. *Library Revision* 59(4): 261-273.

Maditinos, D., Chatzoudes, D., Tsairidis, C. & Theriou, G. 2011. The impact of intellectual capital on firms' market value and financial performance. *Journal of Intellectual Capital* 12(1): 132-51

Mohamedi, M. & Ghorbanhosseini, M. 2015. Identifying and Measuring Factors Affecting Human Capital Development in Social Security Hospital of Saveh City Applied mathematics in Engineering. *Management and Technology* 3(3): 131-141.

Patton, M. 1990. Qualitative evaluation and research methods. Beverly Hills, CA: Sage Publication.

Peng, T. J. & Roos, G. 2007. Intellectual Capital and Performance Indicators; Taiwanese Health care sector. *Journal of Intellectual Capital* 8(3): 538-556.

Stewart, T.A. 2000. Intellectual Capital: The new wealth of organisations, Nicholas Brealey Publishing, London.

Subramaniam & Youndt. 2005. The influence of Intellectual Capital on the types of innovative capabilities. *Academy Management Journal* 48(3): 450-463.

Taylor, S.A. 1994. Distinguishing service quality from patient satisfaction in developing health care marketing strategies. *Hospital Health Service Administration* 39(2): 221-36.

Van Beveren. 2003. Does health care for knowledge management? *Journal of Knowledge Management* 7: 90-95.

Veltri, S., Bronzetti, G. & Sicoli, G. 2011. Reporting intellectual capital in health care organizations: specifics, lessons learned, and future research perspectives. *Journal of Health Care Finance* 38(2): 79-96.

Wiig K.M. 1997. Knowledge Management: Where Did It Come from and Where Will It Go?" *Expert Systems with Applications* 13(1): 1-14.

Wiig K.M. 2002. Knowledge Management in public administration. *Journal of Knowledge Management* 6(3): 224-239.

Yin, R.K. 2003. *Case study research: Design and methods*. Sage Publications.

Youndt, M.A., Subramaniam, M. & Snell, S.A. 2004. Intellectual capital profiles: An examination of investments and returns. *Journal of Management Studies* 41(2): 335-361.

Zigan, K., Macfarlane, F. & Desombre, T. 2008. Intangible Resources as performance drivers in European Hospitals", *International Journal of Productivity and Performance Management* 57(1): 57-71

Noradiva Hamzah
Fakulti Ekonomi dan Pengurusan
Universiti Kebangsaan Malaysia
43600 UKM Bangi Selangor
MALAYSIA
E-mail: adibz@ukm.edu.my

Hazlina Hassan
Faculty of Accountancy
Aras 1 & 2 Bangunan FPA
UiTM Selangor
Kampus Puncak Alam
42300 Bandar Puncak Alam
Selangor
MALAYSIA
E-mail: hazli872@salam.uitm.edu.my

Norman Mohd Saleh
Fakulti Ekonomi dan Pengurusan
Universiti Kebangsaan Malaysia
43600 UKM Bangi Selangor
MALAYSIA
E-mail: norman@ukm.edu.my

Amrizah Kamaluddin
Faculty of Accountancy
Aras 1 & 2 Bangunan FPA
UiTM Selangor
Kampus Puncak Alam
42300 Bandar Puncak Alam
Selangor
MALAYSIA
E-mail: amrizah@salam.uitm.edu.my